

2010, Surface Water Quality Assessments Update

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November 23rd, 2009

Water Quality Standards Advisory Committee Mtg.

Schedule for the 2010, 305(b)/303(d)

September 5, 2009	CALM Comment Period Opens
September 10, 2009	Request for Data
October 5, 2009	CALM Comment Period Ends
December 1, 2009	Finalize 1:24,000 AUIDs
December 7, 2009	Finalize CALM / Finish Incorporating Changes to Database
December 15, 2009	Begin 2010 Assessments
February 1, 2010	Publish Draft 303(d) for Public Comment
April 1, 2010	Submit Final 303(d) and 305(b)

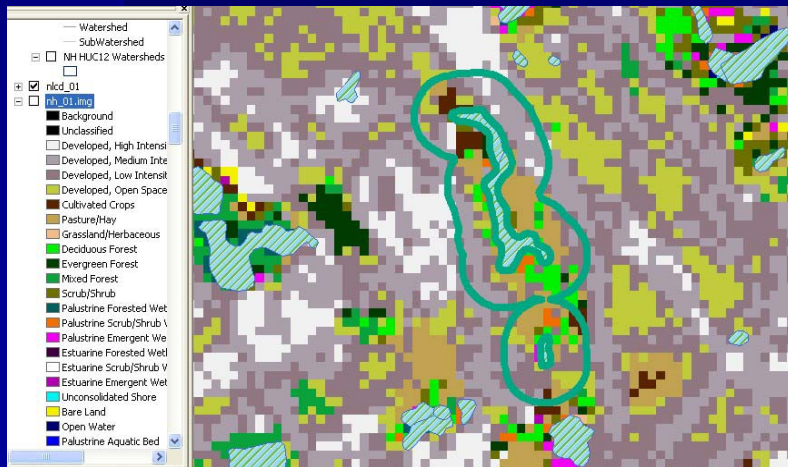
What is changing in the CALM?

- Trophic Class based Nutrient Criteria.
- Naturally low pH based upon color has been removed.
- Naturally low Aluminum based upon naturally low pH.
- DO in Class A lakes evaluated at all depths except absolute bottom.
- Application of ISF general standard to make potential attaining and potential not attaining estimates on Designated Rivers.
- Drinking water MCLs and the AGQS evaluated to make potential attaining and potential not attaining estimates.
- Water & Fish consumption standards in Env-Wq 1700 applied to Fish Consumption Use for all parameters to make potential attaining and potential not attaining estimates.
- Wetlands – New Assessment units.
- Antidegradation Tiers - Probable HQW calculations.

Wetlands

- New Assessment Units will be built using the same methodology as used for “The New Hampshire Method”
- Assessed condition will be by the same methodology as used in 2008
 - Establish buffers in GIS
 - Evaluate buffers based on Land Cover

Likely High Impact Site



Likely Low Impact Site



Determine % of Each Landscape Type

Likely High Impact Site

- 40% Developed – Med. Density
- 20% Developed – Low Density
- 15% Pasture/Hay
- 10% Developed – High Intensity
- 10% Developed – Open Space
- 3% Palustrine – Scrub/Shrub
- 2% Estuarine – Emergent

**After weighting the land cover
class scores by the fraction,
Final Score = 53
(Potentially Not Supporting)**

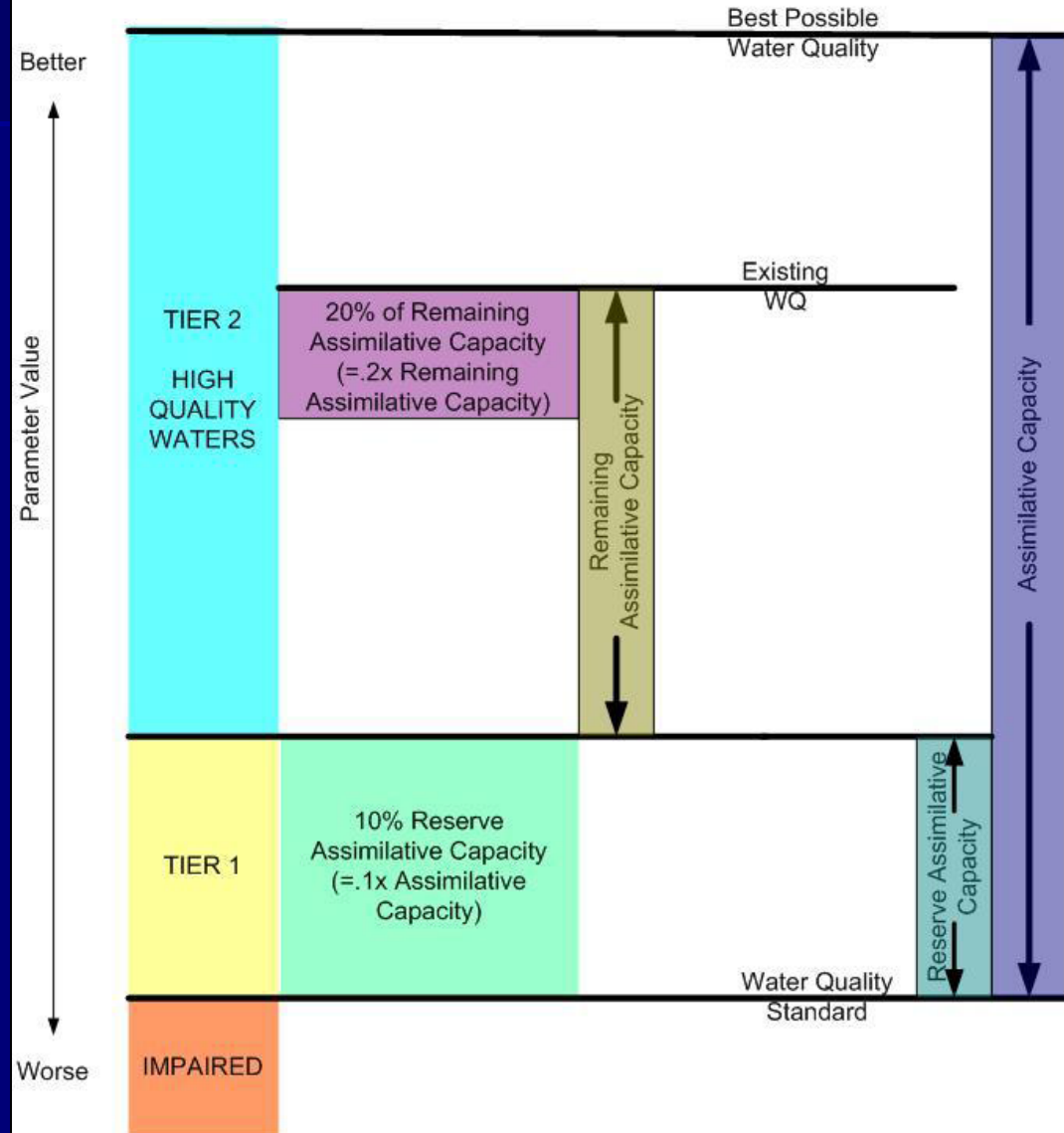
Likely Low Impact Site

- 60% Deciduous Forest
- 35% Mixed Forest
- 5% Pasture/Hay

**After weighting the land cover
class scores by the fraction,
Final Score = 0.5
(Potentially Attaining Standard)**

Estimation of Antidegradation Tiers

CONCEPTUAL DIAGRAM
FOR TIER 1 AND TIER 2
WATERS ESTIMATION
(not to scale)



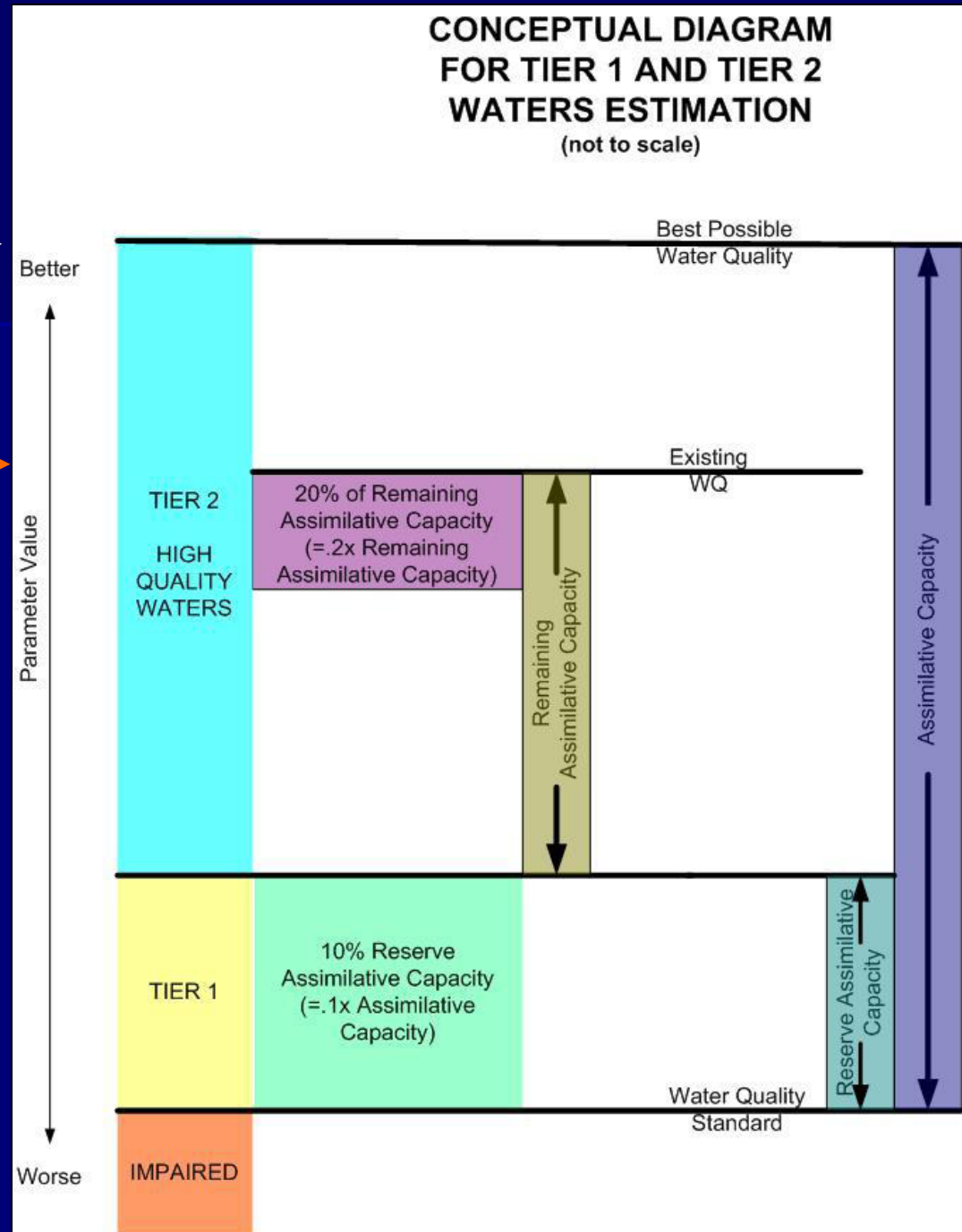
Reasonably straight forward

Requires consideration of,

- Critical Seasons/Critical Periods
- Minimum data requirements
- Evaluate for, “...point sources discharging at their allowed loadings and the highest loadings anticipated from nonpoint sources.” [Env-Wq 1708.08(b)]

Reasonably straight forward

Reasonably straight forward



Parameters for which we will calculate a probable existing water quality

- D.O. ppm
- D.O. Percent Saturation (24hr)
- Aquatic Life Use - Trophic Class Based – Chl_a & TP
- Primary Contact Recreation – Chlorophyll a
- Primary Contact Recreation– Bacteria
- Estuarine Nitrogen
- Toxics

- *Will also try*
 - *Ammonia*
 - *Biological Integrity Metrics*
 - *Clarity (turbidity or secchi disk)*

Descriptors to be added where sufficient data exists

	AntiDeg Tier Code	Description
→	Imp	Where a given parameter is impaired.
→	PT1	Where the estimated existing water quality falls into the reserve assimilative capacity.
.....→	T1	After review of the data and/or additional data collected and the calculated value falls into the reserve assimilative capacity.
→	PHQW (T2)	Where the estimated existing water quality exceeds the reserve assimilative capacity.
.....→	HQW (T2)	After review of the data and/or additional data collected and the calculated value exceeds the reserve assimilative capacity.
→	ORW (T3)	Outstanding Resource Waters are Tier 3 waters regardless of the existing water quality condition.
→	<i>null</i>	Where there is insufficient information to estimate the existing water quality the field will be left blank.

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<http://des.nh.gov/organization/divisions/water/wmb/swqa/index.htm>